

Date: 04/03/2018

Subject: DVM S Eco Heat Recovery, HR Changer

Models: AM0\*\*NXMDCR/AA, MCU-R4NEKON

### DVM S Eco Heat Recovery

- DVM S Eco Heat Recovery units provide the same features as standard DVM S Eco Heat Pump systems but also provide simultaneous heating and cooling.
- Compatible with all DVM S indoor units that are less than 96,000 Btu/h.
- All DVM S Eco HR systems require an HR Changer (model: MCU-R4NEKON)
- If multiple Mode Control Units (MCU) are required, HR Changers must be installed between the outdoor unit and additional MCU's
- Compatible with current MCU capacities
- New inverter controller and main PCB compared to DVM S Eco Heat Pump units
- Optional base pan heaters will be available Q3 2018 (model number: MHC-015EE)

### Basic Specifications

Model Name			AM036NXMDCR/AA	AM048NXMDCR/AA	AM053NXMDCR/AA	AM060NXMDCR/AA
Power Supply		ø / V / Hz	1 / 208/230 / 60	1 / 208/230 / 60	1 / 208/230 / 60	1 / 208/230 / 60
Capacity (nominal)	Cooling	Btu/h	38,000	48,000	53,000	60,000
	Heating	Btu/h	42,000	54,000	61,000	66,000
Compressor	Type	-	Twin BLDC Rotary x 1	Twin BLDC Rotary x 1	Twin BLDC Rotary x 1	Inverter Scroll x 1
Pipe Connections	Liquid Pipe	inch	3/8	3/8	3/8	3/8
	Gas Pipe	inch	5/8	5/8	3/4	3/4
	Max. Length <sup>1</sup>	feet	492	492	492	492
	Max. Height <sup>2</sup>	feet	131 / 164	131 / 164	131 / 164	131 / 164
	Max. Total Pipe	feet	984	984	984	984
Operating Temp. Range	Cooling	°F	23 - 118	23 - 118	23 - 118	23 - 118
	Heating	°F	-13 - 75	-13 - 75	-13 - 75	-13 - 75

<sup>1</sup> Distance from DVM S Eco HR outdoor unit to farthest indoor unit

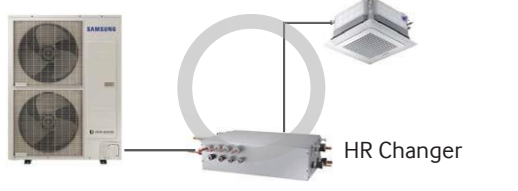
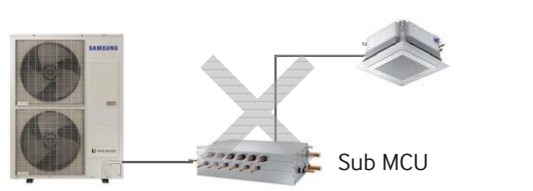

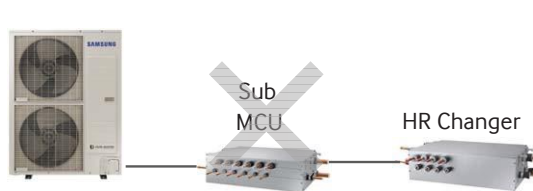
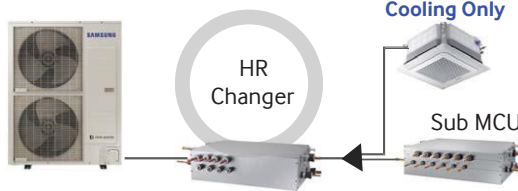

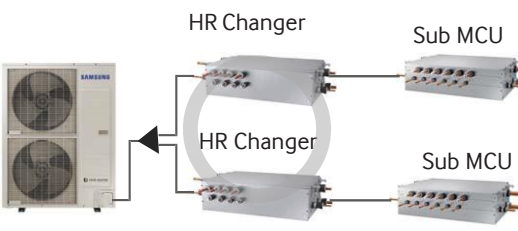
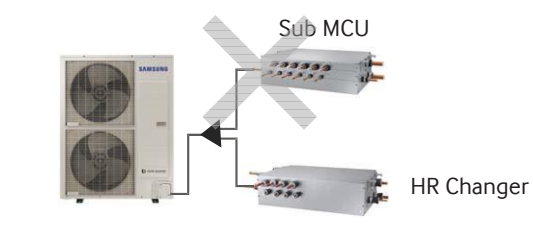
<sup>2</sup> Maximum vertical separation between a DVM S Eco HR outdoor unit and the highest/lowest indoor unit. 131 Feet when outdoor unit is lower than indoor units. 164 Feet when outdoor unit is above the indoor units.

### New HR Changer and MCU Models

Similar to standard DVM S Heat Recovery systems, DVM S Eco Heat Recovery systems will allow piping of cooling only indoor units direct to liquid and suction pipes bypassing MCU connection. Cooling only units must be installed after HR Changers and must be 50% or less of total capacity.

Model Number	Description	DVM S Eco HR	DVM S HR	Max. Capacity per port	Max. Capacity (2 twinned ports)	Max. Total Capacity
MCU-R4NEKON (new model)	4 Port (HR Changer)	0	x	19,000 Btu/h	47,000 Btu/h	76,000 Btu/h
MCU-S6NEK3N (new model)	6 Port (Sub MCU)	0	0	19,000 Btu/h	47,000 Btu/h	76,000 Btu/h
MCU-S6NEK2N	6 Port	0	0	54,000 Btu/h	108,000 Btu/h	216,000 Btu/h
MCU-S4NEK3N	4 Port	0	0	54,000 Btu/h	108,000 Btu/h	216,000 Btu/h
MCU-S2NEK2N	2 Port	0	0	54,000 Btu/h	108,000 Btu/h	108,000 Btu/h
MCU-S1NEK1N	1 Port	0	0	54,000 Btu/h	Not Applicable	54,000 Btu/h

## HR Changer Connection Examples

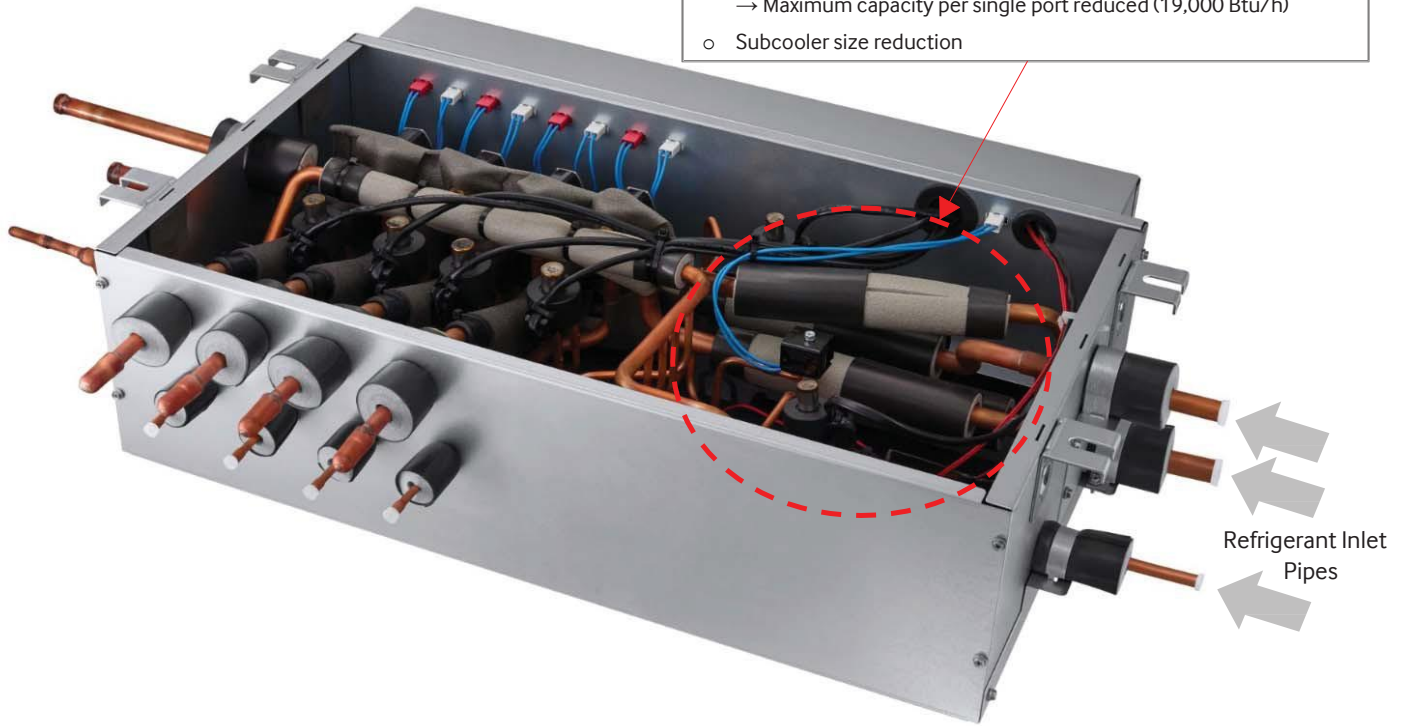
Case	Correct installation*	Incorrect installation
HR Installation (HR changer required)		
Serial Installation		
Cooling only Indoor unit Installation		
Parallel Installation		

\*Refrigerant supply pipes to HR changer can only enter on one dedicated side of the HR Changer. The images above are for simple explanation only. Refer to the HR changer installation manual for full details.

### HR Changer (MCU-R4NEK0N)

#### Piping Changes

- HR function components (check valve, etc.)
- Reduction of solenoid valve orifice and piping size  
→ Maximum capacity per single port reduced (19,000 Btu/h)
- Subcooler size reduction



### Sub MCU (MCU-S6NEK3N)

#### Piping Changes

- HR function components (check valve, etc.)
- Reduction of solenoid valve orifice and piping size  
→ Maximum capacity per single port reduced (19,000 Btu/h)
- Subcooler size reduction

